

NOTES FROM THE BIOLOGICAL LABORATORY
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(1) *On the presence of a Fluke in the Egg of a Fowl.*

I owe the specimens, upon examination of which this note is founded, to the kindness of Miss Stone, of St. Kilda, by whom they were found, and to whom my best thanks are due, for the very kind and untiring assistance which she rendered in searching for the animals in a great number of eggs. Miss Stone was successful in finding the living Trematode in three eggs and undoubted traces of the animal in numerous others obtained both in Melbourne and Ballarat, and she has thus succeeded in showing that the animal, which has been but comparatively rarely recorded before from the hen's egg, is probably not infrequently present in this position in Australia, and that its ova protected in their hard cases, are really often to be found in the hen's egg. The animal itself was first described and named by Rudolph as occurring in the bursa fabricia of different birds, and hence the adult on rare occasions apparently travels up the oviduct and reaching the part in which the "white of the egg" is formed, becomes entangled in this and carried down again, till finally the shell is secreted on the outside and the animal enclosed. The fluke was close to the ovum in the centre, and therefore must have travelled a considerable distance up the oviduct, or may have worked its way in towards the centre, after deposition of the egg. In the majority of cases there were present in the eggs what were undoubtedly remains of flukes in a more or less decomposed state. Their nature was rendered evident by the presence of the very characteristic ova of the flukes with the minute oval brown-coloured egg cases. How long these ova could remain alive, and whether when swallowed by some other animal they would develop, it is of course impossible to say, without experiment.

The adult fluke is at most not more than $\frac{1}{8}$ - $\frac{1}{4}$ in. in length. The alimentary canal has the usual form. The ovary is a racemose gland surrounding and opening into the part where the two ducts from the yolk-glands join and the uterus arises. The much-coiled uterus is full of ova with brown shell cases, and runs forward to open, not close to the male organs, but, as can be seen both in the whole animal and by means of a continuous series of transverse sections, anteriorly by the left side of the head sucker. The three adult animals examined agreed in this respect: in the whole animals the eggs could be traced forwards to the sucker, but this might of course have been due to their lying in a groove on the surface; sections showed that this was not so, but that the oviduct ran forward. The testes are two large oval bodies, one on each side of the ventral sucker. Their ducts unite and open in the usual position.

The excretory vesicle is well developed, and has strongly muscular walls. In sections the median canal can be traced as a single duct as far forwards as the ventral sucker.

(2) *On the presence of a Pentastomum parasitic in the Lung of the Copper-head Snake (Hoplocephalus superbus).*

My attention was first drawn to this arthropod by my friend and pupil, Mr. Dombain, who noticed its presence when cutting open a snake on King Island in November, 1887. Further searching showed me at once that the copper-head snakes of the island were infected by the parasite, which lives in their lungs. In one snake I counted no fewer than 129 specimens in the lung, and yet to all appearance this animal was perfectly healthy. When living they are of a bright red colour, due to the amount of blood sucked into the body from the lung of the snake.

The parasite lies with its head buried in the lung tissue and firmly attached by means of its four very definite hooks. The female, which is much the largest, measures when full-grown some 2 inches in length, and has from about 60-70 very distinct annulations on its body. The mouth is ventral and anterior, and apparently plugged by a somewhat triangular-shaped piece of tissue with chitinous edges. The anus